

HOOD CANAL BRIDGE NEWS



Retrofit and East-Half Replacement Project

February 2004

Technology in Action: A gateway for all to see

Once crews begin to open the Hood Canal Bridge to its 600-foot peak, traffic gates come down. No one gets through.

In the past two years, crews have had to close the bridge very few times due to weather. Mostly, it's traffic due to passing ships, a process that takes 10 to 20 minutes.

There is a sequence of events that leads up to those 20 minutes.

First, one of the three radios in the tower crackles. It could be the Washington State Patrol, passing ship or a bridge worker stationed on the lower deck.

Or, it could be all three.

In the case of a passing submarine, WSP troopers halt traffic on the bridge.

In most cases, it's only the two radios

crackling. The bridge operator talks to the passing ship, and his crew below, who are checking for any debris that may jam the mechanism.

As the ship nears and the skipper notifies the tower, traffic barriers come down and the bridge deck opens up.

Most of the time, bridge crews don't find many problems. Although, crews have had a few instances of drivers pulling a few stunts. Now, WSDOT has a barrier that will stop a fully loaded tracker-trailer combination. Security is pretty tight, so it's not the scofflaws WSDOT crews worry about these days, leaving those problems to the WSP.

Most of the problems come from tourists just trying to get a better look at the passing

military vessels.

Area residents, tourists and business travelers make close to 20,000 trips over the waters of Hood Canal between Jefferson and Kitsap counties on a typical weekday, while that number jumps to 26,000 on the weekend.

Dean Crawford, Hood Canal Bridge maintenance supervisor along with Gary Allen, WSDOT bridge technician, related stories of drivers who try and time their trip so they are at the front of the line when ships pass through the bridge's opening. This has led to reasons for a much longer traffic backup the public doesn't hear or see.

As they wait, and watch, some try to get a closer look at the passing ship or use this proximity to the beautiful backdrop of the Olympic Mountains as a photo opportunity.

Then it happens - people lock their keys in the car or leave the headlights on.

The HCB crew looks forward to the widening of the highway portion of the bridge, scheduled for this summer.

"People are curious, and I admit, a submarine is neat. It's not something you get to see every day," said Crawford, who oversees opening and closing the massive structure for the military and civilian vessels that pass through. "But our job is to keep everyone safe and the traffic moving."

Tower o' the Sea: It's not just the wind

SHINE - Go up 27 steps and you find the electrical room. Head down two floors and find the hulking emergency generators. On step 47, the workers have lockers and a break area. But it's on step 63 that you will find the top, the control room, the brains of the Hood Canal Bridge.

For the drivers of the thousands of cars, trucks and other vehicles that pass by daily - or the numerous recreational vehicles pass by each summer - they most likely think of an airport tower.

In many ways, the responsibilities are the same: both control towers holds the people that manage traffic and houses those who operate sophisticated machinery. And, each sits high up in the air where wind and other weather-related conditions affect the occupants much more than people realize.

However, the control tower at the Hood Canal Bridge sits on a body of water and has to compete not only with the wind, rain and an occasional earthquake but the tidal fluctuations of Puget Sound.

And, when the rain and wind pick up, the people and objects in the tower feel it much greater than those on the surface.

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A truck passes the Hood Canal Bridge control room in early January.

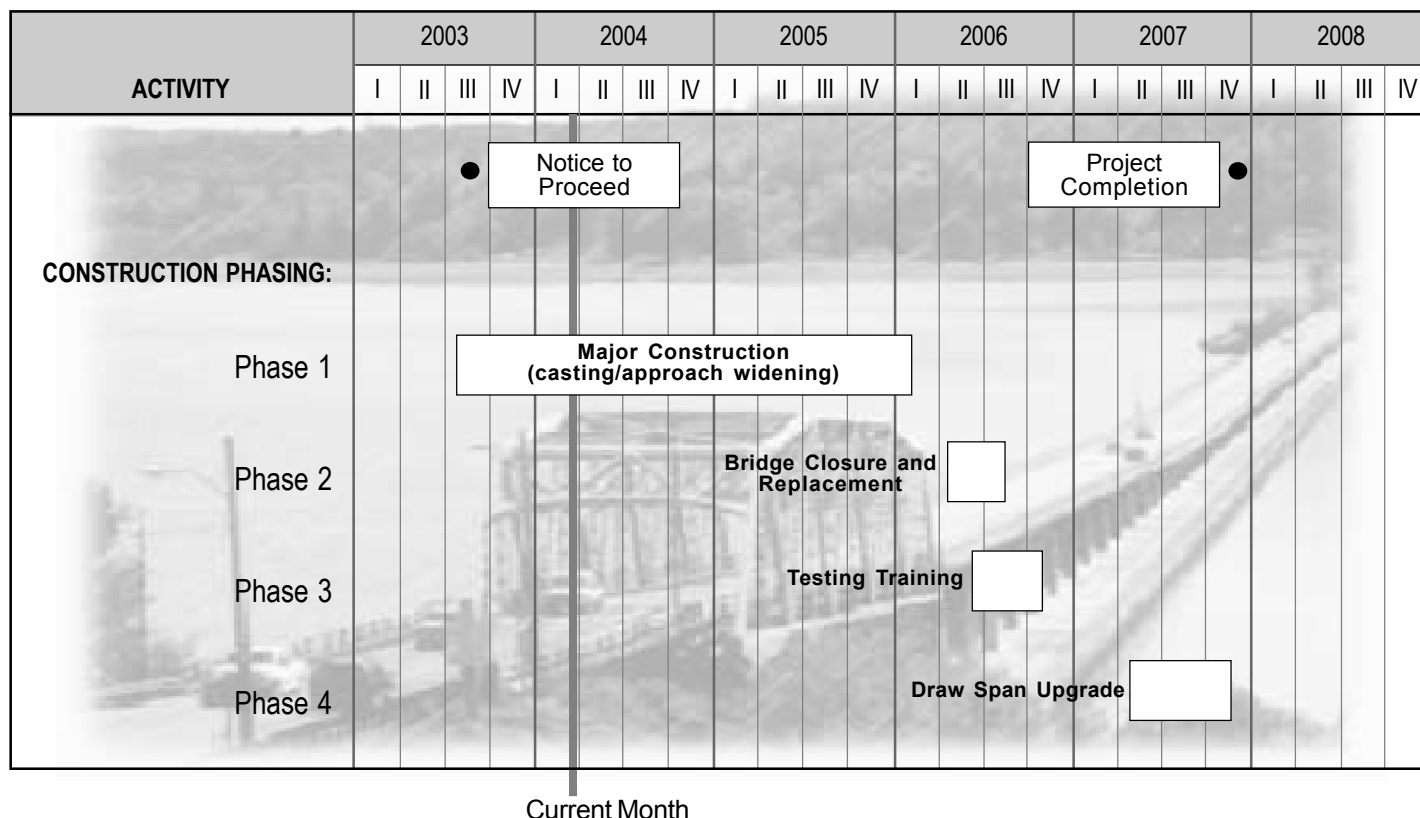
Hood Canal Bridge News

is prepared monthly by the WSDOT as a service to those interested in the Hood Canal Bridge retrofit and replacement project.

Traffic information Hood Canal Bridge:
1-800-419-9085.

Weather and roadway conditions:
www.wsdot.wa.gov/traffic.

If you have any comments on **Hood Canal Bridge News** or would like more information contact Lloyd Brown, communication manager, at (360) 357-2789 or via E-mail: brownl@wsdot.wa.gov.



Wind

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No motion sickness sufferers need apply.

"It gets really rocking and rolling," said Gary Allen, WSDOT bridge technician.

"It's almost like an earthquake. We're four stories up, things go flying."

When the winds exceed 40 mph at an angle greater than 20 degrees to the longitudinal centerline of the bridge or if conditions otherwise warrant it, the bridge shall be opened. WSDOT established this criterion in the early 1990's. However, it's not only the wind that crews have to deal with.

Floating bridges function like a ship. The roadway is built upon a series of concrete pontoons that float, despite their enormous size and weight.

Dean Crawford, bridge maintenance supervisor, told the story of a visiting naval officer.

A former midshipman, Crawford spent four years on a US Navy vessel.

"He said, yes, your bridge is almost like a ship," Crawford remembers the naval officer saying. "But I said, 'yes, except you guys can turn your bow into the wind during a storm.'"

At the Hood Canal Bridge, their only recourse during a storm is opening the massive structure.

The crew of eight relies heavily on every

drive motor, hydraulic pump, electrical generator, and control circuitry working correctly and in sequence. They rely on communication from the US Navy, US Coast Guard, WSP, and WSDOT's own Olympic Radio dispatch center.

Everyone must be on the same page prior to lifting the close to 250 feet of roadway (weighing more than 100 tons) five feet. The center draw span weighs close to 300 tons and creates an opening the length of two football fields.

This alleviates the pressure on the bridge structure and works as a buffer to protect this vital state highway from ending up at the bottom of Hood Canal.

Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternate formats by calling the Washington State Department of Transportation ADA Accommodation Hotline collect (206) 389-2839. Persons with hearing impairments may access Washington State Telecommunications Relay Service at TTY 1-800-833-6388, Tele-Braille 1-800-833-6385, Voice 1-800-833-6384, and ask to be connected to (360) 705-7097.

Presentations available

Want a presentation for your club or organization? Contact HCB communication team at (360) 357-2789

For more project information, contact: WSDOT Port Orchard Project Office at (360) 874-3000, e-mail: orfeedback@wsdot.wa.gov or on-line at www.hoodcanalbridge.com



Pat Ternes from Holt Drilling was part of a crew drilling dewatering wells at the Port Angeles graving yard site in January.